

**REMARKS**

Claims 1-34 are in the application.

Claims 1, 2, 3, 6, 8, 9, and 12 are amended.

Claim 1 is amended to conform to the language of claims 8, 9 and 12 to recite that the "state" of the anisotropic property is preserved.

Claims 2, 3, 8, 9 and 12 are amended to correct the spelling of "anisotropic".

Claim 6 is amended to correct a technical error.

**Claims 1-13**

Claims 1, 8, 9, and 12 are rejected as being anticipated by Kamiyama et al., US 6,043,940. The Examiner takes the position that "Kamiyama teaches applying a layer of the substrate (2 in Fig. 2) which has anisotropic properties. The anisotropic properties remain unchanged through the application of the substrate." While it may be true (although not admitted by applicants) that the anisotropic properties are preserved through transfer, a state of these properties is clearly not preserved, as originally required by claims 8, 9 and 12, and now required by claim 1 as amended.

With all due respect, Kamiyama et al. teaches an optical system for optical recording on a magnetooptical disk having a layer 2. There is simply no teaching how that layer is formed on the substrate 1, and in particular, there is every reason to believe that the film is formed by a vapor deposition method, on a plastic (polycarbonate) substrate, rather than "transferred" as required by the claims. There is no recitation of the anisotropic state prior to transfer, so it is not reasonable to infer that this is preserved. Likewise, the reference does not enable any means for preserving the anisotropic state, even were this function to have been suggested. Thus, while the film admittedly has anisotropy as one of its properties, the state of this property is apparently not preserved while it is being formed on the disk. See, e.g., US 6,853,384, which generally describes traditional processes for manufacturing optical disks.

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The Examiner states that the "recording medium" of the present claims is met by the disc D in Figs. 1 and 2 of Kamiyama et al. The lens and substrate have anisotropic properties (or perhaps, isotropic properties). The limitation "transferring a portion of the recording medium to a carrier, wherein ... a portion of the recording medium has ... detectable anisotropic optical properties" is allegedly met by the disc in Fig. 2, consisting of two substrate layers 1, 2, with layer 2 being a recording layer "having its anisotropic properties unchanged". With all due respect, there is no transfer of a portion of the recording medium anywhere disclosed by Kamiyama et al. The disclosure starts with a disk having layers 1, 2 and ends the same way. Perhaps, an anisotropic state of a portion of the recording layer is changed by heat and magnetic fields as a result of a recording process, but this does not involve any transfer of the recording medium.

None of the cited teaches or suggests that an anisotropic material may be transferred to a substrate from a recording medium while preserving its anisotropic vector, or more generally, its state. Thus, applicants respectfully submit that claims 1-13 are not anticipated by Kamiyama et al., which fails to teach or suggest the claimed invention, and fails to provide an enabling disclosure for the presently claimed invention.

#### Claims 14-17

The Examiner indicates that he believes that "fluorescent light is just a light of a particular wave length taught by the art of record." The Examiner therefore clearly misapprehends the scope of the claims. Fluorescent light is light generated by a physical process within a composition, wherein the light emitted is of a different wavelength than the incident light. The peak absorption and peak emission wavelengths are characteristics of the composition. A fluorescent dye integrated into a polymer will typically also display dichroism (anisotropy), and thus the absorption and emission will have characteristic optical polarization axes. Since the absorption and fluorescent emission have different wavelengths, they can be distinguished using a wavelength selective filter. Likewise, the characteristic polarization axis may be measured. Therefore, the device as set forth in claim 14 is particularly adapted for authenticating a fluorescent pattern, by both fluorescence characteristics and polarization characteristics.

While it is true that Edwards teaches the use of two wavelengths, these are both externally supplied by separate lasers, and not a result of an internal or external fluorescent process. The same wavelength used for illumination is used for sensing in each case. The system and method of Edwards would not generally operate using fluorescence, since the technique requires coherent illumination, which would generally not be available as a result of simple fluorescent emissions, which are ordinarily non-coherent. In fact, even if the laser employed by Edwards did employ a fluorescent dye, this would not meet the claim limitations. In particular, the optical filter must pass the fluorescence and exclude the narrowband emission, which structure and arrangement are nowhere taught or suggested in the reference. The dichroic mirror 92 combines (and separates) the separate beam paths for the two separate wavelengths. However, there is simply no disclosure of any fluorescent conversion of 680/633 nm light to 830 nm light, which would be required in order to meet the claim scope. The dichroic mirror, presumably the "dichroic element" referred to by the examiner, is not sensed by the optical image sensor. There is no background subtraction under a plurality of respective axes of the polarizer, and indeed, the polarizer of Edwards is static.

It is noted that Li also fails to teach or suggest a "fluorescent dye composition". The Examiner is not free to ignore substantial claim language which has a generally accepted meaning in the art, and which is used properly by applicant. "Fluorescent" means (<http://en.wikipedia.org/wiki/Fluorescent>):

**Fluorescence** is a luminescence, i.e. optical phenomenon in cold bodies, in which a molecule absorbs a high-energy photon, and re-emits it as a lower-energy (longer-wavelength) photon. The energy difference between the absorbed and emitted photons ends up as molecular vibrations (heat). Usually the absorbed photon is in the ultraviolet, and the emitted light (luminescence) is in the visible range, but this depends on the absorbance curve and Stokes shift of the particular fluorophore. Fluorescence is named after the mineral fluorspar (calcium fluoride), which exhibits this phenomenon.

#### Claims 18-21

Applicants have reviewed Kamiyama with respect to claims 18-21, and can find no particular relevance, other than perhaps the general teaching that optically readable data storage media with a data pattern, readable through an optical system, were known prior to the present invention.

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Likewise, the recorded "hash of identifications" is an inkjet pattern readable by a human \*\*\*\*or optically written cryptographic code, and not the same imaging system which also reads the data pattern. Thus, it is believed that Waters et al., in combination with any of the art of record, including Kamiyama et al., fails to teach each element of the claims and therefore fails to set forth a prima facie case of obviousness.

Waters et al. indeed discloses an optical disk serialization and/or authentication scheme, which seeks to impose an optically readable pattern of optical characteristics on the disk (Col. 5, lines 39-49), readable by a common imaging system with the data pattern on the disk. However, as disclosed in Col. 3, lines 37-40 and 48-64, Col. 4, line 59-Col. 5, line 8, which states that the tracks or sectors to be damaged are selected prior to damage thereto--and thus the damage is deterministic in nature. (Deterministic means: "Referring to events that have no random or probabilistic aspects but proceed in a fixed predictable fashion."

[helios.bto.ed.ac.uk/bto/glossary/d.htm](http://helios.bto.ed.ac.uk/bto/glossary/d.htm)). Since the damage is deterministic, it can be readily duplicated (reproduced). Thus, it is believed that Waters et al., in combination with any of the art of record, including Kamiyama et al., fails to teach each element of the claims and therefore fails to set forth a prima facie case of obviousness.

#### Claims 22-28, 30

As discussed above with respect to claims 18-21, it is respectfully submitted that Waters et al. does not teach or suggest the use or analysis of non-deterministic characteristics, and the damage analyzed by Waters et al. is clearly deterministic in nature, caused by a laser which is specifically controlled to act at a particular position on the disk.

Since Waters et al. do not teach a non-deterministic pattern, they also do not teach a non-deterministic pattern analyzer.

It is therefore respectfully submitted that the combination of Waters et al. and Edwards does not teach or suggest the present invention of claims 22-28 and 30, and that the examiner has failed to set forth a prima facie case of obviousness.

#### Claim 29

Claim 29 is also rejected as being anticipated by Kamiyama et al., in a rejection that is not understood by applicants. The rejection, in its entirety, states:

8. Referring to claim 29, applicant argues that the authentication tape recited in [claim] 29 is not taught in the prior art of record. Examiner respectfully disagrees and points out that, Kamiyama shows two different substrates one of which creates a recording layer that is applied on the layer of the disc substrate (see Column 3, lines 59-68), which meets the "sealing tape" recited in claim 29.

\* \* \*

14. Referring to claim 29, Kamiyama shows two different substrates one of which creates a recording layer that is applied on the layer of the disc substrate (see Column 3, lines 59-68), which meets the "sealing tape" recited in claim 29.

The cited section of Kamiyama, in turn, states:

Optical recording on an optical recording medium is shown in FIG. 1. A partial section along the line A--A of FIG. 1 is shown in FIG. 2. On a substrate 1 of a resin such as polycarbonate, a glass, etc., a recording layer 2 is provided to form an optical magnetic disc D. The recording layer 2 includes a dielectric layer of, for example, silicon nitride, a magnetic layer of, for example, Gd--Fe--Co alloy or Tb--Fe--Co alloy, a dielectric layer of, for example, silicon nitride, a metal layer of, for example, aluminium, and a protective layer of, for example, UV resin. A laser beam L having a wavelength of 500 nm.about.700 nm is condensed by an optical head being an optical system for optical recording and a resulting beam having a specified beam spot size is irradiated on the optical magnetic disc D. As a result, information is recorded on the magnetic layer, being in the recording layer 2 of the optical magnetic disc D, within an area that was irradiated by the beam spot. The optical head 3 is supported by a movable arm 7 being connected to a controller that is not illustrated.

Applicants have carefully reviewed the cited sections, and do not understand how one of ordinary skill in the art at the time of the invention would have understood that this section (or indeed, any section) of Kamiyama, discloses "sealing tape".

The Examiner asserts that Kamayama et al. show "two different substrates", citing Col. 3, lines 59-68. Applicants do not interpret this text to teach two substrates, nor any structures which

might possibly be considered "sealing tape" by a person of ordinary skill in the art at the time of the invention. Further, there is simply no analysis with respect to the remaining elements of claim 29, and indeed applicants can find no analogies in the reference to these elements, which include: "Authenticating sealing tape, comprising a seal tamper indicator, a plurality of unique identification portions of the tape, periodically disposed along a length thereof, and an ascertainable non-deterministic characteristic of the tape in proximity to the periodic unique identification portions."

The following are the various relevant definitions of "tape" from Google,

<http://www.google.com/search?hl=en&q=define%3Atape>:

a long thin piece of cloth or paper as used for binding or fastening; "he used a piece of tape for a belt"; "he wrapped a tape around the package"

fasten or attach with tape; "tape the shipping label to the box"

magnetic tape: memory device consisting of a long thin plastic strip coated with iron oxide; used to record audio or video signals or to store computer information; "he took along a dozen tapes to record the interview"

[www.cogsci.princeton.edu/cgi-bin/webwn](http://www.cogsci.princeton.edu/cgi-bin/webwn)

Tape is a long, sticky ribbon that is used to fix things or to stick things together. tape measure A tape measure is used to measure things. tapir A tapir is a plant-eating, hoofed mammal with a small trunk. tarantula A tarantula is a large, hairy spider. target A target is something you aim at.

[www.enchantedlearning.com/Tisfor.shtml](http://www.enchantedlearning.com/Tisfor.shtml)

a narrow woven fabric.

[www.apparelsearch.com/glossary\\_t.htm](http://www.apparelsearch.com/glossary_t.htm)

Used to seal cases, available in pressure sensitive or gummed adhesive types

[www.wcaxar.com/faqs\\_terms.htm](http://www.wcaxar.com/faqs_terms.htm)

(1) (noun)(noun) Recording medium consisting of a magnetic coating applied to a plastic substrate. See magnetic recording tape. (2) (verb)(verb) To record music or other program material, whether or not the recording is actually written to magnetic tape, for storage, editing, and/or playback. (3) Another name for the tape recorder operating mode normally called repro.

[www.dilettantesdictionary.com/index.php](http://www.dilettantesdictionary.com/index.php)

A storage medium that is used to record audio. Also used to play back music and messages through the sound system.

[www.angelfire.com/band2/jeffreyscott/live/glossary.html](http://www.angelfire.com/band2/jeffreyscott/live/glossary.html)

A narrow width reinforcing fabric or mat.

[www.justintanks.com/def.html](http://www.justintanks.com/def.html)

measuring device which can be rolled or wound up.

[www.alliancereps.com/glossary/plumbing\\_terms3.asp](http://www.alliancereps.com/glossary/plumbing_terms3.asp)

Usually gummed paper in strip form and wound on spools for use.

[na.fasson.com/fma/fmasite.nsf/PG/LNB?C6\\_NT](http://na.fasson.com/fma/fmasite.nsf/PG/LNB?C6_NT)

While other definitions exist, these are clearly irrelevant, and none supports the interpretation proffered by the Examiner.

Applicants respectfully submit that a "scaling tape" as properly interpreted comprises an elongated thin, flexible structure, generally having an adhesive (but possibly to which an adhesive or other "sealing" process may be applied), adapted for example for attaching to surfaces or covering a gap.

It is therefore respectfully submitted that no prima facie rejection of claim 29 as being obvious has been asserted, that the Final rejection must be withdrawn as being premature, and that the claim is allowable. Reconsideration of the rejection of claim 29 is respectfully requested.

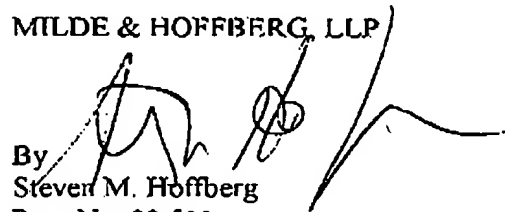
#### Claims 31-34

The Examiner states that claim 31 is rejected on the same basis as claim 14, and therefore applicants distinguish these claims on at least the same basis as well. In addition, claim 31 has an illumination source having a time varying polarization axis. This feature is not taught or suggested in any of the cited references.

It is therefore respectfully submitted that all of the claims are allowable over the art of record, and that the Final rejection should be withdrawn.

Respectfully submitted,

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